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| APPLICATION NO.                      | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--------------------------------------|-------------|----------------------|---------------------|------------------|
| 09/726,818                           | 11/30/2000  | Timothy Del Sol      | 00-473              | 2231             |
| 20306                                | 7590        | 03/01/2004           | EXAMINER            |                  |
| MCDONNELL BOEHNEN HULBERT & BERGHOFF |             |                      | VU, NGOC K          |                  |
| 300 SOUTH WACKER DRIVE               |             |                      | ART UNIT            |                  |
| SUITE 3200                           |             |                      | PAPER NUMBER        |                  |
| CHICAGO, IL 60606                    |             |                      | 2611                |                  |
| DATE MAILED: 03/01/2004              |             |                      |                     |                  |

*Handwritten number 8*

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/726,818

**Applicant(s)**

SOL ET AL.

**Examiner**

Ngoc K. Vu

**Art Unit**

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_\_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,5 and 6 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2-7</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Drawings*

1. Figure 7 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leano et al. (US 6,453,472 B1) in view of Roeck et al. (US 6,594,305 B1).

Regarding claim 1, Leano teaches in a data-over-cable system a method for establishing communications between a network client device and a network device (two-way communication between a cable modem and a headend), the method comprising: assigning the network client device (cable modem) what particular time slot of what particular frequency range the network client device should use; transmitting signals that are received by the network device (head end) at different power levels; initial ranging process to configure particular parameters of the network client device (cable modem) for reliable communication; and specifying particular power adjustments for signals transmitted by the network client device (cable modem) (see col. 4, lines 15-31).

Leano does not explicitly teach determining if a range response message is received from the network device; adjusting the power level and reinitiating step "initiating..." and "determining ..." till a range response message is received.

However, Roeck teaches a method for initial ranging of a cable modem included checking a RNG-RSP message is received from the CMTS at step 306; adjusting local power at step 312, and repeating steps 302 thru 306, including transmitting a RNG-REQ message to CMTS, until cable modem receives a RNG-RSP message in time (see figure 3A). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the ranging process of Leano by checking a RNG-RSP message is received from the CMTS, adjusting local power and reinitiating by transmitting a RNG-REQ message to CMTS until cable modem receives a RNG-RSP message in time as taught by Roeck in order to examining connectivity status between a cable modem and a headend in an effective manner.

Regarding claim 2, the combination teaching of Leano and Roeck discloses that the network client device is a cable modem (see Leano/col. 4, lines 15-18; Roeck/ figures 1-3).

Regarding claim 3, the combination teaching of Leano and Roeck discloses that the network device is a cable modem termination system (headend/CMTS - see Leano/col. 4, lines 15-18; Roeck/ figures 1-3).

Claim 5 is computer program claim which embodies the limitations of the method claim 1 in software. Leano does not explicitly teach the method embodied in computer program (i.e., software). Roeck discloses method and computer program products for evaluating a communication link between a cable modem termination system and a cable modem (see col. 3, lines 64-67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of Leano by providing the method steps as

discussed with respect to claim 1 as program code (i.e., software) in order to automate the combined system of Leano and Roeck and provide computer control.

Regarding claim 6, Leano as modified by Roeck further discloses that initial ranging includes sending a range request message (RNG-REQ message – see Roeck/figure 3A).

***Allowable Subject Matter***

4. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claim.

The closes prior arts, Leano (6,453,472 B1) discloses a ranging process including a headend telling a cable modem what time slot of what frequency range the cable modem should used; Roeck discloses initial ranging process of a cable modem. Neither Leano nor Roeck teaches or suggests “the step of dividing the dynamic range of the network client device includes dividing the dynamic range of a transmitter of the network client device by the dynamic range of a receiver of the network device”.

***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ruszczky et al. (US 2002/0101883 A1) discloses a method for reducing interference from initializing network devices in a data-over-cable system.

Unger et al. (US 6,230,326 B1) discloses a method and apparatus for initialization of a cable modem.

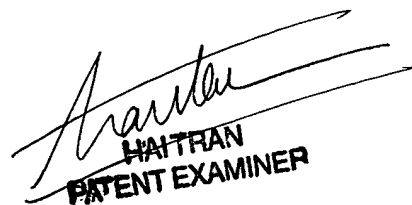
Art Unit: 2611

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ngoc K. Vu whose telephone number is 703-306-5976. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Faile can be reached on 703-305-4380. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NV  
February 10, 2004

  
HAITRAN  
PATENT EXAMINER